DOCUMENT RESUME

ED 044 361 SP 004 318

TITLE	A Feasibility Study of Four-Year Elementary Teacher Training at Branch Campuses in Ohio: Report of the Ad Hoc Task Force on Off-Campus Teacher Education.
INSTITUTION	Ohio State Univ., Columbus. Coll. of Education.
SPONS AGENCY	Ohio Board of Regents, Columbus.
PUB DATE	Jun 70
NOTE	85p.
EDRS PRICE	EDRS Price MF-$0.50 HC-$4.35
DESCRIPTORS	Elementary School Teachers, Estimated Costs, *Feasibility Studies, *Preservice Education, Program Improvement, Teacher Supply and Demand, *University Extension

ABSTRACT

In considering the feasibility of installing junior and senior year elementary education teacher training programs in branch campuses in Ohio, the study group explored teacher demand and supply (1970-80) and implications for program quality, cost, and other factors. Conclusions were: 1) Ohio is likely to have an oversupply of "regular" elementary teachers in the next decade. 2) The introduction of upper division programs should thus be undertaken only to improve the quality of teacher preparation and to establish a better statewide distribution of opportunity for it. 3) The quality of training can probably be improved through development of such branch programs because they would permit greater student- faculty contact and greater program individualization, encourage creative and innovative training designs, generate extensive field experience components, and provide for preparation of specialist elementary teachers (on main campuses whose enrollment of "regular" trainees could be reduced). 4) Necessary components for a branch program would include 125 full-time-equivalent upper division students, a four-to five-member professional staff, and appropriate library, classroom and field experience facilities. The order of priority recommended for branches satisfying these criteria is Stark, Ashtabula, Firelands, Cleveland, Cincinnati, Mansfield, Lima, Chillicothe, and Zanesville. Each third and fourth year program is expected to increase public operating expenses by at least $123,000 per year. (JS)

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A FEASIBILITY STUDY OF FOUR-YEAR ELEMENTARY TEACHER TRAINING AT BRANCH CAMPUSES IN OHIO:

Report of the Ad Hoc Task Force
on Off-Campus Teacher
Education

to

The Ohio Board of Regents

June 30, 1970

Study Conducted by:
The Teacher Education Study Group
College of Education
The Ohio State University
Columbus, Ohio

SP004318

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CHAPTER ONE

INTRODUCTION AND CONCLUSIONS

I INTRODUCTION

On February 20, 1970, the Ohio Board of Regents passed the following resolution:

> BE IT RESOLVED: by the Ohio Board of Regents that the twelve state-assisted universities and the State Department of Education are hereby requested immediately to create an Ad Hoc Task Force on Off-Campus Teacher Education to determine the need and demand for baccalaureate courses (upper division) and degree programs for elementary teacher education to be offered at appropriate residence credit centers off-campus, the necessary and available resources for offering such courses and degree programs, and recommendations, concerning the desirability and feasibility of such action, and
>
> BE IT FURTHER RESOLVED: that the Chancellor is hereby authorized to request the release of $10,000 from appropriation item 235-502 of H.B. 531 of the 108th Ohio General Assembly in order to provide staff assistance to said Task Force, with the expectation that a report of the Task Force can be submitted to the Ohio Board of Regents by June 30, 1970.

The Conference of Deans of Education of Ohio State Universities in turn appointed a sub-committee chaired by Dean Clayton Schindler of Kent State University to undertake the requested study. Committee members included Dean Norwood Marquis of Wright State University; Dean Theodore Jensen of Bowling Green State University; Dean Arliss Roaden of Ohio State University; and Dr. Franklin Walter of the Ohio Department of Education. The sub-committee recruited a professional staff of faculty members and students from The Ohio State University under the leadership of Professor Donald Sanders to collect data and to undertake analysis of the

questions involved. Members of the Teacher Education Study Group are listed in Appendix A. Persons and organizations contributing to the study in other ways are identified in Appendix B. We wish to acknowledge their generous support. Responsibility for analysis, interpretation, and recommendations, however, rests with the Study Group and the Ad Hoc Task Force.

The task was to investigate the feasibility and desirability of installing junior and senior year elementary education teacher training programs in branch campuses and academic centers. The locations of these campuses and of other institutions of higher education are shown in Appendix C. Technically, the study was confined to an analysis of programs to prepare "regular" elementary education teachers, since these constitute the bulk of Ohio's requirements for elementary teachers prepared through conventional programs. It is recognized that there probably will be a growing need for "specialist" teachers in elementary schools over the course of the next decade, and where appropriate, the report refers to such needs. The basic definition of the task, however, was confined to the education of regular teachers for self-contained elementary classrooms.

The time-frame used for the analysis is the decade 1970-80. This period was chosen on the ground that a relatively long perspective was necessary for dealing with the question raised. However, since any forecast of the future is subject to substantial error, a decade was judged to be the maximum period appropriate for this particular task.

Concerning the feasibility of introducing third- and fourth-year elementary teacher education programs, it seemed to the Study Group that questions fell into four general categories:

1. What is the demand for "regular" elementary education teachers in the State and in the areas (i.e., counties) served by each branch?

2. What will be the supply of elementary education teachers available during the period 1970 to 1980?

3. What will be the program quality implications of introducing such programs in branch campuses or academic centers?

4. What will be the cost and other implications of introducing such programs in branch campuses or academic centers?

This report is organized according to these questions. Chapter Two introduces an analytic framework for handling questions of supply and demand and discusses demand conditions for elementary education teachers over the next decade. Chapter Three continues the analysis with reference to supply on a statewide basis. Manpower requirements by service area are also considered. Chapter Four defines program offerings necessary to satisfy appropriate standards of quality, and Chapter Five synthesizes the analysis and explicates the recommendations made.

Certain surveys of branch communities originally planned for inclusion in this study were modified or eliminated entirely as a consequence of the unrest on State university campuses during May and June of this year. Despite the loss of these elements and some difficulties experienced by the Study Group and university personnel to whom inquiries were addressed, we judge that adequate evidence for the recommendations has been accumulated.

II CONCLUSIONS

The analysis described in the following chapters leads to certain conclusions which are reported here in outline form for the convenience of readers:

1. On a statewide basis over the course of the next decade, Ohio is likely to experience a significant oversupply of "regular" elementary teachers relative to demand.

2. Similarly, virtually all counties in the State will experience a a similar condition of oversupply, although there may continue to be

local differences resulting from specific local conditions such as relative salaries paid to teachers.

3. As a consequence of these factors, it would be unsound public policy to increase the capacity of the State system of higher education to produce additional elementary teachers over and above the existing trend.

4. Therefore, introduction of upper division teacher education programs should be undertaken only for the purpose of improving the quality of teacher preparation in the State.

5. It is probable that the quality of teacher preparation in the State can be improved through development of third and fourth year elementary teacher education programs at some branch campuses for the following reasons:

a. Branch programs would permit greater personal contact between students and faculty.

b. They also would permit greater individualization of program experiences.

c. Newly created programs may be expected to encourage creative and innovative new teacher preparation designs.

d. Branch programs could have an opportunity to generate extensive field experience components without overburdening public school classrooms in the surrounding community as is sometimes the case with existing programs.

e. Provisions for preparation of elementary teachers with special skills could be created.

6. The statewide distribution of opportunities to pursue teacher preparation could be improved.

7. If efforts to introduce upper division elementary teacher education programs are undertaken they should be directed toward two objectives:

a. To establish a better statewide distribution of opportunities to pursue teacher preparation, and

b. To improve the quality of teacher preparation.

8. Such efforts should be accompanied by actions to reduce demand for places in regular elementary teacher preparation programs at main campuses and by an increase of efforts on such campuses to prepare specialist elementary teachers (e.g., special education teachers), since large scale and diversified instructional resources available only in large institutions are required for this task.

9. Programs of appropriate quality can be established at branches in which sufficient enrollment can be expected to sustain an adequately diversified and qualified staff. Sufficient enrollment means a minimum of 125 full-time-equivalent upper division students. Four or five professional education faculty members, appropriate library and classroom facilities, and local opportunities for field experience programs are necessary components of such programs. It is estimated that a minimum of 125 FTE upper division elementary education students would be required to utilize such a staff reasonably effectively.

10. If elementary teacher education programs are to be installed, they should be placed in branches in which it is most probable that the required upper division enrollment can be obtained, where the future demand for elementary teachers is relatively large, where necessary facilities already exist or are planned, and where geographic factors are such that the needs of a relatively large area can be served. The following order of priority is recommended for branches satisfying these criteria:

a. In the judgment of the Study Group, Stark, Ashtabula, and Firelands campuses most clearly satisfy these criteria.

b. In the judgment of the Study Group, such programs can also be justified for the Cleveland metropolitan region and the Cincinnati metropolitan region. There are several possible locations in each of these areas. The Study Group concludes that the Raymond Walters branch is the most desirable location in the latter case but has no specific recommendation to make for the Cleveland area.

c. Finally, the Study Group recommends that such programs be considered for the Mansfield, Lima, Chillicothe and Zanesville branches. It is noted that the Lancaster branch might serve as an appropriate alternative to Chillicothe and Zanesville. In these cases, demand conditions are not clear and potential enrollments may not be large enough at the outset to provide full utilization of the necessary staff and facilities. However, the needs of the wider geographical area which can be served may be sufficiently great to warrant the necessary expenditures.

11. As time passes, large, unexpected changes in such factors as school enrollments, local and state financing, and teacher turnover may call for revision of this priority listing. Therefore, the list should be re-examined periodically and revised as needed, in light of changing regional needs and local circumstances.

12. Each third and fourth year program may be expected to increase public operating expenditures for elementary teacher preparation by at least $123,000 per year for each minimum size (125 FTE upper division students) unit established. This estimate covers only course work taken during the junior and senior years in the professional education sequence--or, in other words, only half of the credit hours to be earned during the final two years of the program. At the present time, there is some underutilized staff capacity in general education programs on most branch campuses. If this existing staff were insufficient to provide <u>any</u> of the additional general education course work required of juniors and seniors, additional expenditures of approximately $123,000 would be necessary for each minimum size program, bringing total operating cost per FTE student in the junior or senior year to nearly $2,000 annually. In other words, additional operating expenditures may range from about $1,000 to $2,000 per year for each FTE junior or senior student, depending on local conditions. Any capital expenditures required would raise the cost by an undetermined amount. Program costs are judged to be acceptable in view of the advantages that may be expected to accrue to the children and school districts and to persons intending to become teachers in the areas affected.

CHAPTER TWO

THE DEMAND FOR ELEMENTARY SCHOOL TEACHERS: AN OVERVIEW

I INTRODUCTION

The prospective supply and demand for elementary school teachers in Ohio has a bearing on the desirability of creating four-year teacher training programs at selected branch campuses in the State. Data on teacher demand and supply are presented in this and in the following chapter. A model or conceptual framework for interpreting relevant labor market information is explicated in the next section of this chapter. This is followed by a section on the statewide need for elementary teaching personnel. The succeeding chapter contains an assessment of the future availability of teachers in the absence of new teacher training programs at selected branch campuses and a description of the likely relationship between teacher supply and demand between now and 1980. The next chapter also presents demand estimates for local areas served by branch campuses.

The Teacher Education Study Group was asked to consider the feasibility of (and, requirements for) new elementary education programs. In considering the need for graduates of such programs, we have restricted attention to persons assigned to (or, prepared for) "regular" instructional positions in elementary schools. In other words, we have not examined the need for (or, supply of) teachers of "exceptional" children (e.g., educably mentally retarded) or other "specialists"

at the elementary school level, such as art, music, physical education, and remedial reading teachers. There are two reasons for their exclusion from this particular study. First, the "regular" elementary teaching force is large enough that there are possibilities of developing reasonably efficient four-year programs at some branches despite rather small enrollments. Second, to serve the small number of students at branch campuses who might be interested in preparing for "specialist" roles would require an array of additional course offerings both difficult and relatively costly to provide off the main campuses.

Since this is a technical report, planning techniques (e.g., enrollment projections) and assumptions are described in detail. Information gaps, of course, exist, and they are noted throughout the text. In some cases, further analysis of existing data at a later date appears warranted. In other cases, fresh research is required, if certain questions are to be answered. As new and better information becomes available, it will be possible to replicate this planning exercise. In the meantime, anyone wishing to determine the "sensitivity" of the present results to possible variation in certain coefficients of the "manpower model" or in underlying demographic assumptions is free to generate his own planning estimates and projections, if he cares to do so.

II A MODEL OF TEACHER DEMAND AND SUPPLY

Demand

The number of teachers that schools attempt to employ in any year presumably depends upon (1) the number of students to be served

and (2) the organizational arrangements and technology (broadly defined) used in providing educational services. The latter doubtless responds--albeit slowly--to conceptions of "good educational practice," the availability of new techniques of instruction, scheduling practices with regard to pupils, work loads of teachers, wage rates relative to prices of other "inputs" to the educational process, and so forth.

Forecasts of teacher employment are generally based on projection of (1) student enrollments and (2) pupil/teacher ratios. Although often mechanical in practice, judgments about the latter variable ought to reflect consideration of the multiple forces--including prospective changes in average class size-- which influence the pupil/teacher ratio. Analytically, it is helpful to consider future enrollments to be a function of (1) the school-age population and (2) age-specific scholarity rates.[1] The school-age population of a state, in turn, is a function of the birth rate, survival rates, and net in-or out-migration of young people from the state.

It may be worthwhile to illustrate some of these points by example. A hypothetical state might find that in the fall of 1969, 98 percent of all children six to thirteen years of age were enrolled in kindergarten through eighth grade (K-8). Another 50 percent of all five-year-olds and some older children may also have been attend-

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1 If data on student flows are available in the form of grade-to-grade transition coefficients, enrollments beyond kindergarten or first grade may be projected on the basis of such coefficients.

ing elementary grades. Let us assume that there were 900,000 pupils in school below the ninth grade. Also, suppose that 30,000 "regular" elementary teachers were employed in 1969. In other words, the ratio of pupils to "regular" elementary teachers was 30/1. If it were not for half-day sessions in kindergarten[2] and widespread departmentalization (and consequent teacher specialization) in grades 7 and 8, this ratio of 30/1 would also be a good reflection of average class size in self-contained elementary school classrooms. As it is, average class size would be lower than 30/1.

To continue the illustration, suppose that a careful analysis of demographic trends (i.e., births, deaths, migration, and changes in scholarity rates) revealed that 980,000 pupils are likely to be enrolled in grades K-8 in 1980.[3] Furthermore, assume that on the basis of an analysis of the junior high and middle school movements, trends in class size, prospective scheduling procedures, use of paraprofessional personnel, and introduction of"new media", we conclude that the ratio of pupils to "regular" elementary teachers is likely to be 28/1 in 1980. By dividing projected enrollment of 980,000 by the pupil/teacher ratio of 28/1, we would find that schools in this hypothetical state would need 35,000 teachers in 1980, compared to 30,000 in 1969.

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2 If kindergarten teachers work full time and average two kindergarten classes (one in the morning,one in the afternoon) per day, and if average class size were 27, the ratio of kindergartners to teachers would be 54/1.

3 Since those who will enter kindergarten and first grade toward the end of the 1970's are not yet born, projected enrollments during the latter part of the planning period are quite sensitive to assumptions regarding births. If the scholarity rate were 98 percent, likely changes in this rate would be of minor importance in forecasting enrollments.

The schools in this hypothetical state, however, must hire more than the 5,000 "additional" teachers (35,000-30,000) needed to serve projected enrollment. Many of those on duty in 1969, or who will join the teaching force during the 1970's will leave teaching by 1980. Vacancies created through attrition from the teaching force constitute a "replacement need" for teachers over and above the "growth need" stemming from enrollment growth and expected change in the pupil/teacher ratio. There are a variety of reasons for attrition from the classroom. Some teachers die or retire. Others leave the elementary grades for other kinds of employment. Some teachers return to school or home, or enter the military service. Yet others, although they may continue to be elementary teachers, move to schools outside the state.

Supply

In any school year, there are teachers who are new to the school system of a state, in the sense that they were not employed anywhere in the system during the preceding school year. The major component of new teachers each year is the class of college graduates newly certified to teach. In addition to these beginning teachers, experienced former teachers (e.g., women) re-enter the labor force; some young men complete their military obligations and return to teaching; and others enter the teaching force from other positions (e.g., transferring teachers from out-of-state). Thus, it should be clear that the "flow" of teachers into and out of the classroom is a very complex matter. A major planning task is to estimate the size of the in-and-out-flows, and to understand how and why these flow rates might change over time.

III DEMAND: STATE OF OHIO

We turn now to an assessment of the prospective demand for

"regular" elementary school teachers throughout Ohio.

Enrollments

Rather than generate new enrollment projections, we have relied on existing ones. Two projections for grades K-8 have been available to us. Both are limited to the public school system, and we have had to extend the first set to cover the period from 1975 to 1980. These projections are shown in columns 2 and 3 of Table II.1. The first set was prepared for the Ohio Department of Education by Battelle Memorial Institute approximately two years ago. The second was devised recently by a planning team working on a forthcoming revision of the Master Plan for State Policy in Higher Education. In neither case are we fully aware of the complex set of assumptions underlying the projections. The Battelle projections are clearly much higher than those in the other set. Somewhat different assumptions have been made with respect to enrollment rates of five- and six-year-olds, expected births, net migration into or out of the State, and the division of pupils between public and nonpublic schools and between regular and special classes.

We believe that it is wiser to err in the direction of slightly overestimating rather than underestimating the demand for teachers. There is considerable uncertanty concerning what enrollments may be during the latter half of the decade, since many elementary pupils of that period are not yet born. Consequently, much depends on how the birth rate will change.[4] Unless the crude birth rate (i.e., number of

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4 While the birth rate among women of child-bearing age may continue to decline, the number of fertile women will increase substantially during the decade as persons born subsequent to World War II reach adulthood.

Table II.1 Projected Public School and Total Enrollment in Grades K-8, Ohio, 1969 to 1980

Year (Fall)	Public K-8		Total K-8	
	(a) High	(b) Low	(c) High	(d) Low
(1)	(2)	(3)	(4)	(5)
1969 (actual)	1,662,043	1,662,043	1,923,511	1,923,511
1970	1,666,903	1,645,979	1,929,063	1,921,724
1975	1,561,457	1,465,985	1,807,033	1,766,554
1980	1,684,307	1,439,976	1,949,204	1,870,621
Change, 1970-75	-105,446	-179,994	-122,030	-155,170
Change, 1975-80	+ 122,850	- 26,009	+ 142,171	+ 104,067

(a) Projections for 1970 and 1975 prepared for the Ohio Department of Education by Battelle Memorial Institute, Columbus Laboratories; see text for basis of 1980 projection.

(b) Unpublished projections of a planning team working on a forthcoming revision of the Master Plan, May 1970.

(c) Assumes 1969 ratio of public to total enrollment of .8641 will remain constant to 1980; based on column 2.

(d) Assumes ratio of public to total enrollment of .8641 in 1969 will increase to .9004 in 1980; based on column 2.

births per thousand population) continues to decline--which is unlikely because of expected changes in the age composition of the population--the number of persons born in Ohio may rise rather significantly over the next few years. In order to capture the influence of this phenomenon on the number of students during the latter part of the 1970's, we have assumed that public school enrollments in grades K-8 in 1980 will bear the same relationship to the total population in that year as expected in 1975.[5] In other words, it is assumed that the annual number of births in Ohio will begin to rise over the next few years. Between 1957 and 1967, the yearly number of people born in the State fell moderately.[6] Since 1967, however, the number has risen slightly.

While the Ohio Department of Education is primarily interested in public schools for administrative reasons, analyses of elementary teacher supply and demand should consider nonpublic schools as well. Columns 4 and 5 of Table II.1, therefore, show enrollment projections for public as well as nonpublic schools. Both the "high" and "low" forecasts are based on public school projections shown in column 2.

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5 Projected (Battelle) K-8 enrollment in public schools in 1975 was divided by the "medium" total population forecast for the same year, contained in Ohio Department of Development, Economic Research Division, Ohio Population Forecasts (Columbus: Ohio Department of Development, 1968), n.p. This proportion was applied to the "medium" total population forecast for 1980, and 12,000 was added to the product under the assumption that kindergarten enrollments would rise faster than trend as scholarity rates rose among five-year-olds.

6 Ohio Department of Health, Division of Vital Statistics, Report of Vital Statistics for Ohio, 1968 (Columbus: Ohio Department of Health, m.d.), Table 30, p. 87.

Each set reflects somewhat different assumptions concerning the ratio of public to total (public and nonpublic) enrollment. The lower of the two assumes that nonpublic enrollment in grades K-8 will decline as a proportion of the total. The higher set is based on constant relative proportions of public and nonpublic students. These assumptions generate two sets of total enrollment projections, hereafter referred to as the "high" and "low" projections, which are used in this and in the following chapter.

Pupil/Teacher Ratio

Because children in kindergarten and grades 7 and 8 of junior high schools are included in the data on enrollment, it is hardly surprising that the ratio of all students in grades K-8 to "regular" elementary teachers is approximately 34/1. In grades 1-12 of Catholic schools, there were nearly 30 students per teacher in 1968,[7] and we have used this number in projecting regular elementary teacher requirements in nonpublic schools to 1980. As indicated in Table II.2, it is assumed that the number of pupils per "regular" elementary teacher in public schools will decline from 34.05/1 in 1969 to 32.05/1 in 1980.[8]

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7 Rose A. Boehle, "An Analysis of Teacher Supply and Demand in the Catholic School Systems of Ohio (1969-1974)" (unpublished Ed.D. dissertation, University of Cincinnati, 1969), pp. 42,91.

8 Although not shown here, if half-day kindergarten classes averaged 27 pupils per teacher and two-thirds of all 7th and 8th grades were in junior high schools, the ratio of 34/1 is approximately equivalent to an average class size of 27/1.

Table II.2 Projected Ratio of Pupils to "Regular Instruction" Elementary Teachers and Regular Elementary Teachers Required, Grades K-8, Ohio, 1969 to 1980

Year (Fall)	Pupil/Teacher Ratio		Total (Public and Nonpublic) Regular Elementary Teachers Required, K-8	
	Public	Nonpublic	High Enrollment Assumption	Low Enrollment Assumption
(1)	(2)	(3)	(4)	(5)
1969	34.05 (a)	30.0 (b)	57,531	57,531
1970	33.85	30.0	57,982	57,738
1975	32.95	30.0	55,575	54,226
1980	32.05	30.0	61,382	58,762

(a) Actual number based on estimated enrollment of 1,662,043 and "regular instruction" elementary teachers of 48,815; see text for discussion of projected ratio.

(b) Estimate based on data in Rose A. Boehle, "An Analysis of Teacher Supply and Demand in the Catholic School Systems of Ohio (1969-1974)" (unpublished Ed. D. dissertation, University of Cincinnati, 1969), p.6.

It is quite possible that this particular ratio will rise rather than fall over the next decade. Increased departmentalization and the rapid addition of special education, reading, and other specialist teachers to the classrooms could hold the ratio constant even in the face of an anticipated reduction in average class size. Thus, the projected number of regular elementary teachers shown in columns 4 and 5 may prove to be too high. Finally, it is worth noting that the total number of "regular" elementary teachers needed to staff the schools is expected to decline between 1970 and 1975. Beyond 1975, we are projecting an increase in teacher employment through 1980. This assumes that the number of births will rise, there will be some net in-migration, and the pupil/teacher ratio will decline.

Teacher Attrition

Unlike a number of other occupational groups (e.g., physicians), there is heavy turnover among teachers. Moreover, many of those who leave the occupation re-enter it later. This is especially true in the elementary grades, where a large proportion of the teaching force is composed of women. Many women teach for a few years upon graduating from college, leave the labor force to raise a family, and later re-enter the teaching profession when their children are in school. Male elementary school teachers often leave the classroom to become counselors, principals, or to accept positions outside of education entirely.

Figures II.A and II.B provide estimates of the average annual need for regular elementary teachers in Ohio between 1969 and 1980,

Figure II-A

Demand (or, Requirements) for "Regular Instruction" Elementary Teachers, Public and Nonpublic Schools Under Low Enrollment Assumptions, Grades K-8, Ohio, 1969 to 1980

I.	Number of Teachers, 1969	57,531
	A. Average annual "additional" (- if negative) teachers required, 1970-1975	-51
	B. Average annual "replacement" teachers required, 1970-1975	+4,491
	C. Average annual "total number" of teachers required, 1970-1975	+ 3,940
II.	Number of Teachers, 1975	54,226
	A. Average annual "additional" (- if negative) teachers required, 1976-1980	+ 907
	B. Average annual "replacement" teachers required, 1976-1980	+4,482
	C. Average annual "total number" of teachers required, 1976-1980	+5,389
III.	Number of Teachers, 1980	58,762

Figure II-B

Demand (or, Requirements) For "Regular Instruction" Elementary Teachers, Public and Nonpublic Schools, Under High Enrollment Assumptions, Grades K-8, Ohio, 1969 to 1980

I.	Number of Teachers, 1969	57,531
	A. Average annual "additional" (- if negative) teachers required, 1970-1975	- 333
	B. Average annual "replacement" teachers required, 1970-1975	+4,541
	C. Average annual "total number " of teachers required, 1970-1975	+4,208
II.	Number of Teachers, 1975	55,575
	A. Average annual "additional" (- if negative) teachers required, 1976-1980	+1,161
	B. Average annual "replacement" teachers required, 1976-1980	+4,630
	C. Average annual "total number" of teachers required, 1976-1980	+ 5,791
III.	Number of Teachers, 1980	61,382

based on the "high" and "low" total enrollment assumptions. Projected teacher requirements include both "growth" and"replacement" needs. It is assumed that replacement vacancies each year will represent 8.0 percent of the number of teachers in the preceding year. In arriving at this rate, four studies of teacher turnover in public schools were examined. The net separation rates (i.e., total separations less transfers to comparable teaching positions) for public elementary schools identified in the four studies are listed below:[9]

Mason and Bain, 1957-58	11.2%
Lindenfeld, 1959-60	8.1%
NEA, 1965-66	8.5%
NEA, 1966-67	5.6%

The Mason and Bain study was plagued by reporting problems, and it is likely that the net loss between 1957 and 1958 was actually less.[10] Lindenfeld's national study two years later of school district accessions and separations estimated that the loss to elementary school teaching between the fall of 1959 and the opening of classes in 1960 amounted to 8.1 percent of the fall 1959 teaching staff. His study avoided many of the reporting errors found in the 1957-58 study. A survey of public school teachers conducted by the NEA in

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9 Ward S.Mason and Robert K. Bain, Teacher Turnover in the Public Schools, 1957-58, U.S. Office of Education Circular No. 608 (Washington, D.C.:U.S. Government Printing Office, 1959), p.2; Frank Lindenfeld, Teacher Turnover in Public Elementary and Seconday Schools, 1959-60 U.S.O.E. Circular No. 675 (Washington,D.C.: USGPO, 1963), p. 15; National Education Association, Teacher Supply and Demand in Public Schools, 1969 Research Report 1969-R14 (Washington,D.C.: NEA, Research Division, 1970), p.28.

10 Mason and Bain, op.cit., pp. 7-8, 27-28.

1965-66 dealt with their labor force status during the 1964-65 school year. In this and in the other NEA study, rates of loss to teaching were "...estimated by subtracting the number of new positions created [between school years] ... from the estimated number of persons teaching [during the year of the study] ... who were not teaching the previous year, and calculating the percent of the ... [earlier school year] staff represented by this estimated number of positions vacated by teacher separations."[11] In light of these reports, it is probably not unreasonable to assume that replacement needs for regular elementary teachers in Ohio may average approximately 8.0 percent per year.[12] Indeed, as will be pointed out in the next chapter, this number may be too high.[13]

In any case, the estimates of demand for regular elementary teachers shown in Figures II-A and II-B assume that replacement needs will average 8.0 percent per year. Since the absolute number of regular elementary teachers is not expected to change much during the 1970's, replacement needs will be the major component of teacher demand. We now turn to the matter of teacher supply and to the adequacy of that supply in light of probable demand conditions.

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11 NEA, Teacher Supply and Demand in Public Schools, 1969, op.cit., p.28.

12 The U.S. Office of Education commonly used this rate in projecting teacher needs. See Projections of Educational Statistics to 1976-77 (Washington, D.C.: USGPO, 1967), p.42.

13 See Table III.2 in the next chapter.

CHAPTER THREE

THE SUPPLY OF ELEMENTARY SCHOOL TEACHERS AND DEMAND BY SERVICE AREA

I INTRODUCTION

We now turn to an examination of the future availability of persons qualified to teach in elementary schools. Following a section on overall supply conditions within the State, the relationship between the availability of qualified candidates for teaching positions and the need for them is explored. Demand conditions within the service areas of branch campuses are discussed in the final section of this chapter.

II SUPPLY: STATE OF OHIO

It is quite common for elementary school teachers to move into and out of school employment during the course of their careers. As a consequence, when considering who might fill future vacancies, it is helpful to think in terms of two major sources of supply: (1) new entrants, who in most cases are recent college graduates, and (2) re-entrants, those with paid teaching experience who are re-entering the classroom after some period of absence.

College Enrollments

Since the vast majority of new entrants to the teaching profession are college graduates meeting certification standards, the number of potential beginning teachers obviously depends on the number of college graduates. The number of college graduates, in turn, is a function of entering college freshmen and retention rates in higher education. Rather than generate a new set of college enrollment projections, we

have adopted the set contained in the 1966 Master Plan.[1] Actual and projected enrollments in Ohio colleges and universities are shown in column 2 of Table III.1. Some 250,000 additional students are expected by 1980.

Along with growth in enrollment will be almost a doubling in the number of bachelor's degrees awarded each year. On the basis of data on number of earned degrees and college enrollments, we have calculated the ratio of current bachelor degrees to students enrolled four years and two years earlier.[2] The use of a two-year lag produces a rather stable set of coefficients, as indicated in column 4. Since the average of the yearly coefficients is slightly more than 12.0, we have used this figure to project the number of bachelor's degrees likely to be awarded each year through 1980. The results are presented in column 3.

Graduates Prepared To Teach

More than one-third of all graduates in the country over the past ten years has completed teacher education programs and has been certified to teach.[3] The proportion meeting certification standards at

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1 Ohio Board of Regents, op.cit., p.32

2 Absence of suitable data prevents using a more refined technique based on grade progression ratios within institutions of higher education.

3 NEA, Teacher Supply and Demand in Public Schools, 1969 op.cit., p.17 Completion of a teacher education program does not necessarily mean that a person majored in education. It does mean that a person completed course work and other program requirements for certification.

Table III.1 Enrollment in Colleges and Universities and Projected Availability of Potential Beginning Teachers at the Elementary School Level, Ohio, 1957-58 to 1979-80

Year	Fall Enrollment, Colleges and Universities[a]	Bachelor's Degrees[b]	Bachelor's Degrees as Percent of Fall Enrollment Two Years Before[c]	Recipients of Bachelor's Degrees Certified to Teach in Elementary Grades		Percentage of Potential Beginning Elementary Teachers Available[e] To Teach	Number of Beginning Elementary Teachers Available To Teach
				Number[d]	Percent of Col. 3		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1957-58	147,906	-	-	-	-	-	-
1958-59	156,385	-	-	-	-	-	-
1959-60	164,375	18,365	12.4	2,435	13.3	NA	NA
1960-61	175,139	NA	NA	2,495	NA	NA	NA
1961-62	188,016	19,025	11.6	2,913	15.3	NA	NA
1962-63	202,374	20,102	11.5	3,046	15.2	NA	NA
1963-64	216,928	23,347	12.4	3,461	14.8	NA	NA
1964-65	241,835	25,101	12.4	NA	NA	NA	NA
1965-66	266,363	26,558	12.2	4,182	15.7	NA	NA
1966-67	290,218*	28,898	11.9	4,507	15.6	NA	NA
1967-68	316,209*	33,049	12.4	5,456	16.5	NA	NA
1968-69	344,528*	34,826*	12.0*	5,944	17.1	NA	NA
1969-70	375,383*	37,945*	12.0*	6,451*	17.0*	80.0*	5,161*
			Planning Projections				
1970-71	409,000	41,343	12.0	6,822	16.5	80.0	5,458
1971-72	434,741	45,046	12.0	7,207	16.0	80.0	5,816
1972-73	462,103	49,090	12.0	7,609	15.5	80.0	6,087
1973-74	491,187	52,169	12.0	7,825	15.0	80.0	6,260
1974-75	522,101	55,452	12.0	8,041	14.5	80.0	6,433
1975-76	555,000	58,942	12.0	8,252	14.0	80.0	6,602
1976-77	572,818	62,652	12.0	8,771	14.0	80.0	7,017
1977-78	591,208	66,600	12.0	9,324	14.0	80.0	7,459
1978-79	610,189	68,738	12.0	9,623	14.0	80.0	7,698
1979-80	629,779	70,945	12.0	9,932	14.0	80.0	7,946
1980-81	650,000	-	-	-	-	-	-

(a) Head count at all levels, not full-time equivalent; figures for 1957-58 through 1965-66 from Ohio Board of Regents, Master Plan for State Policy in Higher Education (Columbus: Board of Regents, June 1966), Table 1, p.20; projected enrollments for 1970, 1975, and 1980 from Ohio Board of Regents, loc. cit., Table 9, p.32; projections for intervening years by straight-line logarithmic interpolation.

Table III.1 (Cont.)

(b) Source: U. S. Department of Health, Education and Welfare, Office of Education, Earned Degreed Conferred (Washington, D. C.: U. S. Government Printing Office, annually); includes all first-professional degrees 1959-60, first-professional degrees requiring four years in 1961-62, and since 1965-66 bechelor's degrees requiring five years; figures for 1968-69 and 1969-70 are estimates based on percentages in column 4.

(c) See text for planning assumptions.

(d) Source: National Education Association, Teacher Supply and Demand in Public Schools (Washington, D. C.: NEA, Research Division, annually) for estimates through 1968-69.

(e) See text for planning assumptions.

Note: NA = Not available

*Estimate on projection prior to 1970-71.

the elementary level has averaged about 14.0 percent per year. As can be seen in columns 5 and 6 of Table III.1, this proportion has been slightly higher in Ohio. We have assumed that the percentage of graduates certified to teach in elementary schools will decline somewhat between now and 1980. The specific rates are indicated in column 6, and the projected number of graduates completing elementary education programs is shown in column 5. Because the total number of graduates is expected to expand very rapidly, the number of potential elementary education teachers is also expected to grow, but at a somewhat slower rate. Because of an emerging oversupply of teacher candidates, the yearly output of potential teachers may actually grow at an even slower pace, once supply-demand conditions in education begin to manifest themselves in larger numbers of graduates experiencing difficulty in finding employment in education.[4]

Re-entrants and Beginning Teachers

Not all graduates prepared to teach either seek or accept employment as teachers. Some continue their studies; others enter military service, or take nonteaching jobs. Nevertheless, as reported by the NEA, the proportion of newly-certified elementary education graduates

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4 As in the past, there are likely to be "surpluses" of teachers in some areas but "shortages" in others. For example, reports from school district superintendents around the State show that as of October 1, 1969, there were 127 budgeted unfilled vacancies for teachers of slow learners, 89 for kindergarten and elementary teachers, but none for history and government teachers. Source: unpublished tabulations of the Division of Teacher Certification, Ohio Department of Education.

across the country who enter teaching by November 1 of the school year following graduation has ranged from 78.0 to 83.2 percent over the past ten years.[5] These percentages, however, understate the actual entry of potential beginning teachers, because all those for whom no follow-up information was available are assumed not to have entered teaching, a highly arbitrary assumption. The published estimates also ignore delayed new entrants.[6] Although delayed entry is no doubt less common among elementary than secondary teachers--since fewer graduates enter military service or continue in school for a time--an examination of the NEA data suggests that 90 percent is not an unreasonable assumption of the proportion of elementary teacher graduates who enter the profession. Nonetheless, to be on the safe side, we shall assume that 80 percent of potential beginning teachers will be available to teach. Such an assumption would doubtless cover any possible net out-migration of teacher candidates from the State.[7]

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5 NEA, Teacher Supply and Demand in Public Schools, 1969, op.cit., p. 21.

6 In a recent study of 830 graduates of The Ohio State University College of Education, over 8 percent delayed their entry into teaching one or more years. John R. Shea, "The Allocation and Utilization of Secondary School Teachers: A Case Study" (unpublished Ph.D. dissertation, The Ohio State University, 1969), p. 103

7 NEA and unpublished data from the Division of Teacher Certification, Ohio Department of Education, suggest that approximately 16 percent of recent graduates newly certified to teach in elementary schools may have taken teaching positions out of state. See reports for 1965 and 1966 in NEA, Teacher Supply and Demand in Public Schools (Washington, D. C.: NEA, Research Division, 1966 and 1967). Using the 16 percent figure, an estimated 951 beginning elementary teachers from the class of 1968-69 may have taken jobs out of state. Special tabulations of newly-certified elementary teachers in Ohio provided by the Division of Computer Services and Statistical Reports, Ohio Department of Education, show that as of September 1, 1969, 566 new graduates from out-of-state colleges were employed in Ohio public schools. If those presumably employed in nonpublic schools (an unknown number) were added to the total, it is still likely that Ohio experienced a net loss of perhaps 300 potential beginning elementary teachers. With data available, there is no way to determine whether Ohio experienced a net gain or loss of more experienced teachers.

The other component of supply is teachers re-entering the classroom. The number has apparently fluctuated considerably in the past, depending on the availability of beginning teachers. Based on past enrollment in the nation's schools, estimated numbers of beginning teachers, and reasonable assumptions with respect to teacher turnover, it is quite likely that more than half of all persons hired for grades K-12 in 1956, for example, were re-entrants to the teaching force. By 1966, the proportion had probably declined to about 25 percent.[8] The two Office of Education surveys cited earlier and the NEA's 1965-66 study uncovered the following annual rates of re-entry to elementary school teaching--that is, the percentage of total accessions to the occupation accounted for by re-entrants as opposed to new entrants:[9]

Mason and Bain, 1957-58	30.4%
Lindenfeld, 1959-60	37.3%
NEA, 1965-66	35.0%

The NEA figure, which is not directly comparable to the other two, represents an estimate based on two assumptions: (1) that the percentage of entrants from college with paid teaching experience was about the same as the percentage of entrants from other sources without paid teaching experience, and (2) that the re-entry rate to elementary school teaching was approximately three percentage points higher than for all teachers in grades K-12.[10] In light of these past estimates and of prospective

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8 Shea, op.cit., p.89

9 Mason and Bain, op.cit., p.2; Lindenfeld, op.cit., p.15; NEA, Teacher Supply and Demand in Public Schools, 1969, op.cit., p.28

10 In the Mason-Bain and Lindenfeld studies, the re-entry rate of elementary school teachers averaged three percentage points higher than the rate of re-entry to all grades K-12.

increases in the labor force participation rates of adult women, it seems clear that re-entrants could very easily account for at least one-quarter of all elementary teachers hired over the next decade. Whether, in fact, they will constitute one-quarter of accessions to elementary school teaching depends on far more than their availability. It also depends on school district hiring practices, the availability of inexperienced teachers, relative salaries, and so forth.

III SUPPLY IN RELATION TO DEMAND

We turn now to the relationship between the need for teachers and their availability. Figures III-A and III-B summarize future supply and demand conditions under the assumptions outlined in this and in the preceding chapter. The first "balance sheet" differs from the second only with respect to underlying assumptions regarding enrollments in grades K-8. The total number of "regular" elementary teachers required to fill prospective vacancies arising because of change in the "stock" of teachers and normal attrition is shown in sections I A and II A of each figure. Because they were discussed in the last chapter, the complex set of assumptions underlying projected needs will not be reviewed here. The average annual number of beginning teachers needed is based on the assumption that re-entrants could constitute one-quarter of all accessions to the teaching force. Finally, a comparison of the number of available beginning teachers and the prospective need for them reveals a rather substantial surplus of qualified candidates from now until 1980. Indeed, there could easily be a surplus of beginning teachers of about 3,000 per year.

IV DEMAND BY SERVICE AREA

While the supply of qualified candidates appears more than adequate to fill prospective elementary teaching positions within the State,

Figure III-A

Supply (or, Availability) of "Regular Instruction" Elementary Teachers, Public and Nonpublic Schools, Under Low Enrollment Assumptions, Grades K-8, Ohio, 1969 to 1980

I.	Number of Teachers, 1969		57,531
	A. Average annual "total number" of teachers required, 1970-1975	3,940	
	B. Average annual "re-entrants" to the teaching force, 1970-1975 (25%)	-985	
	C. Average annual beginning teachers needed 1970-1975		2,955
	D. Average annual beginning teachers available, 1970-1975 (80% of potentially available)		5,869
	E. AVERAGE ANNUAL SURPLUS (+) OR DEFICIT (-)		+2,914
II.	Number of Teachers, 1975		54,226
	A. Average annual "total number" of teachers required, 1976-1980	5,389	
	B. Average annual "re-entrants" to the teaching force, 1976-1980 (25%)	-1,347	
	C. Average annual beginning teachers needed, 1976-1980		4,042
	D. Average annual beginning teachers available 1976-1980 (80% of potentially available)		7,344
	E. AVERAGE ANNUAL SURPLUS (+) OR DEFICIT (-)		+3,302
III.	Number of Teachers, 1980		58,762

Figure III-B

Supply (or, Availability) of "Regular Instruction" Elementary Teachers, Public and Nonpublic Schools, Under High Enrollment Assumptions, Grades K-8, Ohio, 1969 to 1980

I.	Number of Teachers, 1969		57,531
	A. Average annual "total number" of teachers required, 1970-1975	4,208	
	B. Average annual "re-entrants" to the teaching force, 1970-1975 (25%)	-1,052	
	C. Average annual beginning teachers needed, 1970-1975	3,156	
	D. Average annual beginning teachers available, 1970-1975 (80% of potentially available)	5,869	
	E. AVERAGE ANNUAL SURPLUS (+) OR DEFICIT (-)	+2,713	
II.	Number of Teachers, 1975		55,575
	A. Average annual "total number" of teachers required, 1976-1980	5,791	
	B. Average annual "re-entrants" to the teaching force, 1976-1980 (25%)	-1,448	
	C. Average annual beginning teachers needed, 1976-1980	4,343	
	D. Average annual beginning teachers available, 1976-1980 (80% of potentially available)	7,344	
	E. AVERAGE ANNUAL SURPLUS (+) OR DEFICIT (-)	3,001	
III.	Number of Teachers, 1980		61,382

there are additional technical matters relevant to decisions concerning four-year elementary teacher education programs at selected branch campuses. It seems worthwhile, therefore, to review the likely pattern of teacher supply and demand in counties served by branch campuses and academic centers, since labor market conditions vary somewhat by area of the State.

Service Areas

Counties that constitute the "service area" of each branch campus and academic center are listed in Figure III-C. Based on data for the fall of 1968 provided by the Ohio Board of Regents, we have included within each service area counties that had approximately 30 or more residents attending the appropiate branch or center.[11] It should be noted that some counties send relatively large numbers of students to two or more branches or centers. For example, we have included Sandusky County within the areas served by the Firelands campus and the Fremont academic center of Bowling Green State University.

Demand

Table III.2 summarizes likely elementary teaching "manpower requirements" in each service area. Since data for several counties are counted more than once, no totals are shown. Columns 2 and 3 indicate the likely average annual need in each service area for beginning teachers over the period from 1970-75 and 1976-80, respectively. Essentially the same projection techniques used for the State were used to calculate the need for new entrants to the regular elementary teaching force. Population fore-

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11 The most notable exception is the exclusion of Franklin County (served by OSU) from the area served by the Lancaster branch (OU). In 1968, approximately 70 students from Franklin County attended this branch.

Table III.2

Demand for Beginning Teachers, Teacher Turnover, Type of Credential, and Full-time Equivalent "Potential" Enrollment of Existing Teachers, by Service Area, Ohio, 1969 and 1970 to 1980(a)

(1)	Average Annual Requirements for Beginning Teachers 1970-75 (2)	Average Annual Requirements for Beginning Teachers 1976-80 (3)	Estimated Attrition Rate (Percent) of "Regular" Elementary Teachers, 1968-1969 (4)	Estimated Percentage of "Regular" Elementary Teachers with Temporary Certificates, 1969 (5)	FTE "Potential" Enrollment of Existing "Regular" Elementary Teachers at Branch, 1969 (6)
Bowling Green State University:					
Firelands	93	129	7.3	16.3	42
Bryan	44	62	6.8	16.2	24
Fostoria	35	50	5.8	7.4	17
Fremont	58	80	6.2	13.0	27
University of Cincinnati:					
Raymond Walters	316	434	7.7	7.6	152
Tri-County	20	28	6.2	22.3	14
Cleveland State University:					
Solon	587	796	5.9	5.9	310
Euclid	515	688	5.9	6.7	266
Lakewood	434	571	5.9	6.8	238
Kent State University:					
Ashtabula	124	164	6.3	8.7	43
East Liverpool	57	73	6.6	17.2	33
Salem	214	302	5.2	9.0	112
Geauga	536	715	5.9	6.9	275
Orrville	22	35	6.8	15.9	16
Stark	280	358	5.6	5.1	126
Trumbull	140	149	5.4	8.2	76
Tuscarawas	14	26	5.6	20.0	13
Wadsworth	206	285	6.2	7.1	104

Table III.2 (Cont.)

(1)	Average Annual Requirements for Beginning Teachers 1970-75 (2)	Average Annual Requirements for Beginning Teachers 1976-80 (3)	Estimated Attrition Rate (Percent) of "Regular" Elementary Teachers, 1968-1969 (4)	Estimated Percentage of "Regular" Elementary Teachers with Temporary Certificates, 1969 (5)	FTE "Potential" Enrollment of Existing "Regular" Elementary Teachers at Branch, 1969 (6)
Miami University:					
Hamilton	369	473	7.3	6.6	146
Middletown	389	539	7.3	8.1	192
The Ohio State University:					
Lima	80	106	6.0	12.9	40
Mansfield	52	78	7.0	15.2	30
Marion	42	62	7.0	23.6	25
Newark	62	83	8.0	29.5	27
Ohio University:					
Belmont	46	59	6.3	13.9	28
Chillicothe	35	44	6.7	18.1	20
Lancaster	43	55	6.0	22.4	21
Portsmouth	21	34	4.4	9.2	16
Zanesville	48	57	5.7	23.3	26
Ironton	26	33	5.5	4.9	10
Wright State University:					
Piqua	77	98	6.3	18.7	31
Western Ohio	12	18	7.9	26.9	8

(a) See text for discussion of estimating procedures.

Figure III-C

List of Branch Campuses, Academic Centers, and Service Areas, Ohio, 1970

University, Branch or Academic Center	Service Areas (Counties)
Bowling Green State University:	
*Firelands	Erie; Huron; Ottawa; Sandusky
Bryan	Defiance; Fulton; Henry; Williams
Fostoria	Hancock; Seneca
Fremont	Ottawa; Sandusky; Seneca
University of Cincinnati:	
*Raymond Walters	Hamilton; Warren
Tri-County	Adams; Brown; Highland
Cleveland State University:	
Solon	Cuyahoga; Summit
Euclid	Cuyahoga; Lake
Lakewood	Cuyahoga
Kent State University:	
*Ashtabula	Ashtabula; Lake
*East Liverpool	Columbiana; Jefferson
*Salem	Columbiana; Mahoning; Stark
Geauga	Cuyahoga; Geauga; Lake
Orrville	Wayne
*Stark	Stark; Summit
*Trumbull	Mahoning; Trumbull
*Tuscarawas	Tuscarawas
Wadsworth	Medina; Summit; Wayne
Miami University:	
*Hamilton	Butler; Hamilton
*Middletown	Butler; Hamilton; Warren
Ohio State University:	
*Lima	Allen; Auglaize; Hardin; Putnam; Van Wert
*Mansfield	Crawford; Richland
*Marion	Crawford; Marion; Morrow

Figure III-C (Cont.)

Ohio State University (Cont.)	
*Newark	Licking; Perry
Ohio University:	
*Belmont	Belmont; Jefferson
*Chillicothe	Pickaway; Pike; Ross
*Lancaster	Fairfield; Hocking; Perry
*Portsmouth	Pike; Scioto
*Zanesville	Guernsey; Muskingum; Perry
*Ironton	Lawrence
Wright State University:	
*Western Ohio	Mercer
Piqua	Darke; Miami; Shelby

Note: *Branch, not academic center.

casts (medium) came from Ohio Population Forecasts, published by the Ohio Department of Development. The Battelle enrollment projections for grades K-8 in each county were used. The anticipated relationship (percentage) between K-8 enrollment in public schools and the total population of each county in 1970 was continued to 1980, with some modification to account for a somewhat higher trend in kindergarten enrollment. Enrollment forecasts for years between 1975 and 1980 were derived through interpolation. Using nonpublic enrollment estimates for 1969, the proportion of all students in nonpublic schools was assumed to remain constant to 1980.[12]

Estimates of teacher needs in public schools were derived on the basis of the actual ratio of pupils to "regular" elementary teachers in the fall of last year. Those counties with a ratio of 25/1 or less were assumed to retain the 1969 ratio through 1980. Counties with ratios between 25/1 and 30/1 were projected to experience a steady decrease amounting by 1980 to one pupil per teacher. Pupil/teacher ratios between 30/1 and 35/1, and over 35/1, were projected to decline by two and three pupils per teachers, respectively. In the absence of data on teachers in nonpublic schools, a common and constant pupil/teacher ratio of 30/1 was assumed for private schools.

As indicated in column 4 of Table III.2, we know that attrition from the "stock" of public elementary school teachers varies somewhat

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12 These figures, therefore, coincide with the "high" enrollment projections for the State outlined in the last chapter.

by area.[13] Nevertheless, we have used a common annual rate of attrition from the elementary classroom of 8 percent per year for public and non-public school teachers combined. While the rates shown in column 4 of Table III.2 provide some evidence on the "reasonableness" of such an assumption, it is worth noting that the turnover data for 1968-69 fail to include teachers who transfer from self-contained elementary classrooms to other levels of the school system. Thus, all percentages in column 4 probably understate somewhat the attrition rate relevant for our purposes, since net transfers between levels are probably in the direction of secondary schools.[14] Columns 2 and 3 of Table III.2, then, summarize both "growth" and "replacement" needs projected on the foregoing assumptions and the additional supposition that re-entrants will total 25 percent of all new teachers hired.

There is substantial variation by area in the overall number of beginning teachers needed. In those cases where a large, densely populated county is included in the service area -- e.g., Hamilton County for the Raymond Walters, Hamilton, and Middletown branches -- the demand for beginning teachers is high. Nevertheless, it is precisely in such areas that existing programs of teacher education are concentrated. In other instances, a number of smaller counties will probably not generate much of a demand for new teachers. An example is the Lima branch of The

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13 Unpublished tabulations based on matching the social security numbers of all public school teachers employed in the fall of 1968 and of 1969, provided by the Division of Computer Services and Statistical Reports, Ohio Department of Education, June 1970.

14 Unlike reports from local school districts, as measured here attrition does not--and, for our purposes, should not--include interdistrict moves within the State, for such transfers neither add nor subtract from the "stock" of teachers.

Ohio State University which now draws students principally from Allen, Auglaize, Hardin, Putnam, and Van Wert counties. Nonetheless, the annual average need for beginning teachers in these counties is anticipated to exceed 100 near the end of the decade, a rather large number.

Teachers With Substandard Credentials

There is always some question concerning how to treat existing teachers with substandard credentials within a supply-demand framework. We have explicitly assumed that all new teachers to the school system will be persons who meet standard certification requirements. As indicated in column 5 of Table III.2, however, a rather large proportion of "regular" elementary teachers now in public schools possess substandard, temporary credentials.[15] It is likely that a higher-than-average proportion of such teachers will leave teaching. The remainder will undoubtedly seek course work which will enable them to meet standard certification requirements. Therefore, we show in column 6 a highly speculative estimate of how all existing teachers might respond to the availability of upper-division university courses at branch campuses. The numbers are based on the following suppositions: (1) that teachers in the service area with substandard (i.e., temporary) certificates might average three quarter hours of credit per year, and (2) that those with standard certificates might average one quarter hour per year.[16] In the absence of

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15 Unpublished tabulations provided by the Division of Computer Services and Statistical Reports, Ohio Department of Education, May 1970.

16 The total number of credit hours, divided by 45, placed this "demand for courses" on a full-time equivalent basis.

better data, these seem to be reasonable assumptions about the probable demand for courses on the part of teachers who might enroll in the branches on a part-time basis.

CHAPTER FOUR

PROGRAM REQUIREMENTS FOR ELEMENTARY TEACHER EDUCATION

In this chapter the Study Group recommends a program of studies for students majoring in elementary education. If four-year programs are established at branch campuses (or, academic centers), such programs will have to meet certain standards. Intelligent action calls not only for meeting such standards but also appropriate program development over the years. Both are discussed in this chapter.

The program recommended in section II of this chapter meets the requirements for certification of teachers by the State of Ohio[1] and the standards for teacher education established by the National Council of Accreditation of Teacher Education.[2] The recommendations, however, are not intended to be prescriptive; they are suggestive. Nevertheless, it should be recognized that while the proposed program may be modified to some degree, no program which fails to meet the certification requirements of the State can be legally adopted.

I GENERAL CONSIDERATIONS

The recommendations which follow refer to the preparation of undergraduate full-time elementary education majors enrolled in daytime

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1 Ohio Department of Education, "General Information Sheet to accompany application for Four Year Provisional Certificate" (Columbus: Ohio Department of Education, Division of Teacher Education and Certification, 1965).

2 American Association of Colleges of Teacher Education, Recommended Standards for Teacher Education, (Washington, D. C.: American Association of Colleges of Teacher Education, National Council of Accreditation of Teacher Education, 1969).

programs. In-service teachers, who may seek additional class work, represent a different clientele from pre-service students and usually require somewhat different course work. Program elements in this section of the report are based on the needs of the undergraduate elementary education major. Nevertheless, in the judgment of the Study Group the branch campus programs should also be responsive to the needs of in-service teachers who wish to enroll in classes. It will be necessary, of course, to make adequate provision of resources and staff for both clientele.

The establishment of degree elementary teacher education programs at branch campuses should result in a reduction from trend of elementary education majors who otherwise would attend main campuses of existing state-supported universities. This effect should be observable within two years after a branch campus program becomes operational. Reduction from trend in the number of students at main campuses may enable faculties to improve the quality of elementary teacher education programs at these institutions. As suggested in the preceding chapter, questions of teacher quality are becoming increasingly important as the overall supply of regular elementary teachers comes into balance with demand following twenty years of rather severe quantitative shortages.

A recommended program of studies is presented in Section II. The professional sequence described beginning on page 45 is based upon the twin premises that teachers must develop competence to understand and guide the total learning and development of the child, and that they must have an opportunity to develop one or more areas of special competency. The latter component is included in recognition of recent curricular developments in the elementary school program, current adaptations in the roles and responsibilities of teachers, new insights into the nature of learning, and emerging organizational patterns in elementary education. Teachers with new and

more varied sets of special skills and competencies are needed for the future.

II RECOMMENDED PROGRAM OF STUDIES

Listed below under the hearings of general studies, professional studies, faculty, students, other resources, and evaluation, are the program recommendations of the Teacher Education Study Group:

General Studies

1. The general studies should comprise a minimum of 78 required quarter credit hours of study and 54 elective quarter credits of work in general studies. (Graduation requirements = 192 credits.)

2. General studies courses should be taught by fully qualified faculty.

3. General studies courses in science and mathematics should be courses designed for the pre-service elementary school teacher, in contrast with introductory courses for the science or mathematics major. The courses should have a strong laboratory, inquiry-oriented component.

4. Work in the first two years (freshmen and sophomore) should be concentrated in general studies in order to enable the elementary education major to meet the time demands of extensive teaching experiences (observation-participation, student teaching, etc.) of the upper level professional sequence. However, in order to provide for early identification of elementary majors and to provide students a basis for making a career choice about teaching, some early contact of students with elementary pupils is necessary, probably in the sophomore year.

5. The following courses should be provided in the general studies program: (These courses are applicable to the "general studies requirements" listed in 6 below).

	Quarter Hours of Credit
a. Elementary School Health and Physical Education. Personal and community health, physical development and recreation	3-4
b. Elementary School Art Education. Expression, appreciation and classroom methods	3-4
c. Speech for Education Majors.	3-4

	Quarter Hours of Credit
6. General studies requirements:	
a. Language Arts English Composition, 3 quarter hours of Children's Literature, Speech, demonstrated competency in correct use of English.	18
b. Social Studies World Civilizations, Government, Geography, Socio-Economic Problems, United States History. A basic course in American government or United States history must be included.	27
c. Science Science in Everyday Living (biological and physical).	12
d. Health and Physical Education Personal and Community Health, Physical Development, Play and Games.	4.5
e. Arts and Crafts Art(appreciation and expression), Crafts	6
f. Music Music Appreciation and Expression, and Music Literature for Children.	6
g. Mathematics Functional mathematics. Demonstrated competency in mathematics taught in the elementary schools.	4.5
Subtotal	78
h. Electives	54
Total	132

Professional Studies

	Quarter Hours of Credit
1. Requirements	
a. Child Development, Learning and Guidance	3-4
b. Learning-Teaching theory in content and skill areas of the elementary school curriculum	
(1). Teaching the Language Arts	3-4
(2). Teaching Reading	3-4
(3). Teaching Children's Literature	3-4
(4). Teaching Mathematics	3-4
(5). Teaching Science	3-4
(6). Teaching Social Studies	3-4
c. History and Philosophy of Education	3-4
d. Student Teaching	15
Total Required	39-47
Education Electives	14-22

2. Areas of special competency. Approximately 10-15 quarter hours of credit beyond general requirements including appropriate field experience.

a. Teaching children at specific developmental levels, e.g.

(1). Early childhood (approx. ages 2-6)
(2). The elementary school child (approx. ages 7-11)
(3). The early adolescent child (approx. ages 12-14)

b. Teaching children from a particular socio-economic background, e.g.

(1). Children from urban centers
(2). Minority groups

c. Teaching in various organizational plans for the elementary school, e.g.

(1). Team teaching
(2). Nongraded, multi-age and cross-age grouping organizations.

d. Teaching children in various curricular areas, e.g.

(1). Science and mathematics
(2). Social studies
(3). The language arts including reading
(4). Asthetics: art, music, physical education

3. Nature of special competency. Initially provision for at least three special competency study options should be provided, with students required to elect one of the three. Additional options should be developed as rapidly as possible. Study in the areas of special competency should provide both appropriate courses and field experiences. Study in these areas may be the responsibility of faculty within or outside of elementary education, but in all cases planning and periodic review should be an inter-faculty responsibility.

4. Elementary school classroom participation (defined to equal approximately 1/2 class meeting time) should be an integral component of each course listed in 1a and 1b above. The participation should span more than one quarter in the professional sequence and should provide for continuity, gradually increasing classroom teaching responsibilities, and should contain a clear component of guidance and evaluation for the student.

   These professional courses should be scheduled in appropriate clusters quarter by quarter. Thus, for example, 1/2 day participation daily might be included with the professional sequence that quarter.

   Consideration should be given to build continuity into a student's participation by assigning participation leading to student teaching in the same elementary school or in a cluster of schools representing appropriate socio-economic community variables.

5. Other planned experiences with elementary school children are encouraged and may be tied to the professional sequence. Suggested types of experiences with children are:

   a. September field experience
   b. Tutoring
   c. Individual in-depth study of a child in his socio-educational milieu

6. Student teaching should be scheduled near the end of the professional sequence and be a full day teaching experience for at least one full quarter. The following factors should be recognized in organizing the student teaching component of the program:

   a. Student teaching is the joint team responsibility of the public school and university teacher educators.

   b. A strong operational system of providing immediate feedback to the student teacher regarding his teaching is necessary. Qualified staff and appropriate technology must be provided.

c. University faculty supervision of student teaching should be an assigned responsibility of all elementary education faculty at least one quarter each year. University faculty should have direct contact with elementary schools in the participation and student teaching components of the program.

d. Faculty load for supervising student teachers should be computed on the basis of a maximum of 15 student teachers for a full faculty load.

Faculty

1. There should be an officially designated unit responsible for the program of elementary teacher education comprised of faculty who have preparation and clear competence in the field of elementary education.

2. Program defined in the professional studies section requires the following minimum staffing:

   Elementary education professional sequence total required = 39-47 quarter credits.

   Minimum staff (full time) computed on a load of 9-12 credit hours, 3 courses = 4-5. The strong student participation component in the public schools will require considerable staff time, and this is a consideration in recommending a maximum staff teaching load of three courses.

3. Full-time faculty and part-time faculty should be provided in accordance with NCATE standards.

4. Faculty should have demonstrated competence and appropriate specialization in elementary education and should hold the Ph.D. or Ed.D. degree at the time of employment or should show clear evidence of achieving the doctorate within two years. Performance of the faculty of branch campuses should be comparable to that of faculty elsewhere.

5. At branch campuses where enrollment initially is small, elementary education faculty may not have a full load teaching in their specialized area. If they have appropriate qualifications, they may hold a joint appointment in an academic department and in that department teach courses for the elementary education students. The very highest standards and controls should be used in considering this alternative and all elementary education faculty should be directly involved in the participation and student teaching components of the elementary education program.

Students

1. Identification of the student with the program of elementary education should be made as early in his college career as possible. The student should have early contact with elementary schools and pupils to help him make a clear commitment regarding his career decision.

2. Standards of admission to the program should hold to the same academic, health and personality standards at branch campuses as at main campuses and should move in the direction of admitting students into the professional sequence, in part, on the basis of their demonstrated effectivenes with elementary school pupils.

3. Students should be involved in the planning and assessment of the elementary education program in roles that have a significant bearing on decisions.

4. Counseling and advisement of students including teacher placement services should be provided.

5. Elementary education student enrollment should be no less than 125 full-time daytime students. Other student enrollment factors are:

   a. Class size (minimum 21-maximum 30) (exceptions will occur depending upon instructional organization employed)

   b. Annual admissions (minimum) 66

   c. Program attrition (anticipated) 25%

   d. Annual number of graduates (minimum) 50

6. Retention of students in the program should be based upon continuing appraisal of the student's success in interacting with elementary pupils, and other criteria such as professional responsibility, initiative and grades.

Other Resources

An adequate approved library and instructional materials center should be provided. A minimum of 5% of the annual general instructional budget should be provided for this purpose.[3]

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3 American Library Association, American Library Book Trade Annual (Chicago: American Library Association, 1961), pp. 125-133. This percentage is recommended for sustaining and continuing an established library and instructional materials center program at junior colleges and four-year institutions in the country.

Evaluation

1. Follow-up evaluation of graduates from the teacher education program should be a responsibility of the teacher placement service. Also, graduates should be involved in evaluating the program.

2. Continuing assessment and program revision should be carried out as a defined responsibility of the elementary education faculty and student body.

III FUTURE PROGRAM DEVELOPMENT

The Study Group recommends the adoption of the Ohio Consortium Model Elementary Teacher Education Program as a guide for future program development. This model has been developed basically through the efforts of the Ohio Consortium, an organization of Ohio teacher education institutions, under grants from the U. S. Office of Education. Leadership in the model design is centered at the University of Toledo. Phase One, Program Design,[4] and Phase Two, Feasibility Study[5] have been completed. The Consortium model represents an intensive effort in planning for quality programs of elementary teacher education.

The Ohio Consortium model proceeds from the following rationale. First, the program model is based upon the pervasive concern that new programs of teacher education must accommodate the forces of change, and that existing plans of teacher education are not adequate to train teachers for changing conditions in American schools. Second, five major forces of change in American schools are identified: (1) instructional organization; (2) educational technology;

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4 George E. Dickson, et al., Educational Specifications for a Comprehensive Elementary Teacher Education Program, Volume I, The Basic Report and Volume II, The Specifications (Toledo, Ohio: The University of Toledo, Research Foundation, 1968).

5 George E. Dickson, et al., The Feasibility of Educational Specifications for the Ohio Comprehensive Elementary Teacher Education Program (Toledo, Ohio: The University of Toledo, Research Foundation, 1969).

(3) contemporary learning-teaching process; (4) societal factors; and (5) research. Third, the teacher education program must be comprehensive in scope. Therefore, the model includes teacher education components for six target populations of educational personnel who are actively involved in teacher education: (1) pre-service kindergarten and pre-school teachers; (2) pre-service elementary teachers (grades 1-8); (3) all levels of in-service teachers; (4) college and university teachers; (5) administrative personnel (principals and supervisors); and (6) supportive personnel (paraprofessionals and teacher aides).

The following assumptions, taken from the model, underlie and further define the rationale for the program model:

1. Instruction in the elementary school should not be limited to traditional group activities; individually guided instruction or programs of individualization need further development.

2. Elementary teachers (grades 1-8) must have basic teaching competence in the fields of language arts, social studies, reading, mathematics and science with specialization in one of these fields of study, whereas pre-school teachers need more general preparation.

3. The rapid development of educational technology and related materials for instruction require a concentrated effort to train teachers accordingly.

4. There now exists a great deal of information about the learning-teaching process which is not being effectively incorporated into teacher training programs. The development and use of behavioral objectives by classroom teachers is one example of this.

5. Teachers must be keenly aware of cultural differences among people in society that have an effect upon the educational setting.

6. Teachers need to become classroom researchers, pay more attention to the research on teacher characteristics, and become adept in assessing and evaluating teaching behavior and style

7. Research on cross-cultural and cross-national teacher characteristics suggests personal experiences (including teaching) in other countries will help develop within teachers a world point-of-view on man and society.

8. The basic approach to training teachers should be through a multi-activity type program that emphasizes the combination approach of work and study, practicum and experience, and content and training.

9. There should be considerable involvement of public schools as the physical facility for a considerable part of teacher education.

10. Selection criteria should apply to pre-service programs developed from the Ohio specifications but in-service programs of any type, public school or college, will be applicable to present populations serving in these institutions. However, selective retention and dropout are not precluded after entry to any program.

11. A number of assumptions are apparent relative to college and university personnel. The development of the model program should begin with this population but considerable re-education and training is necessary. More work in research and development and technology will be required as program implementation begins. Traditional departmental organizations and within-college structures will require modification as it is assumed that a new program should have an operational structure fitted to it; the model should not be adjusted to existing organizational patterns.

12. The length of teacher education programs should vary considerably with the type and implementation of any specific program. The present pre-service structure of four years can be used as a starting point, but the specifications are flexible so that deviations can occur from traditional time schedules. Particular academic degrees to be awarded is left to the implementing institution at its option. Pre-service teachers prepared according to the model will participate in a program of continuing education after entry into the teaching profession. Finally, the length of time any candidate remains in a training program is dependent on the capacity and ability of the individual to meet program requirements.

The program model is clearly responsive to several professional concerns. There is an emphasis on early childhood, with pre-school and kindergarten teachers considered as one of the target populations. Emphasis on preparing teachers for instructing disadvantaged pupils is

included within the specifications. Emphasis upon individualization is found throughout the program model. Provision for extensive attention to in-service education is made through specifications developed for this target population. The multi-unit school concept, adopted at the outset of the development of the program model, provides for staff differentation in the roles of the principal, team leader, teachers, and supportive personnel. Professional concern regarding the effective and imaginative use of media is reflected in the emphasis on educational technology.

CHAPTER FIVE

FEASIBILITY OF FOUR-YEAR PROGRAMS AT BRANCH CAMPUSES

I INTRODUCTION AND CRITERIA

Preceding parts of this report have established the context within which the feasibility of introducing third and fourth year elementary education programs in branches may be considered. Certain propositions can be used as basic parameters for dealing with the policy decisions involved:

1. The availability of elementary education teachers will very likely exceed demand during the decade 1970-79 unless supply conditions change from those postulated in Chapter Three. A surplus of 3,000 elementary education teachers per year may well be produced with the present set of programs and services in the public and private institutions of Ohio.

2. Although supply will exceed demand across the State, for different reasons recruitment difficulties will probably continue in poorer sections of metropolitan areas and in rural areas. Because of population growth, large metropolitan areas will likely experience a relatively larger need for teachers than other parts of the State. Selective shortages in certain subject areas (e.g., special education) doubtless will continue.

3. The introduction of quality programs for "regular" elementary teachers at branches will require a minimum of four or five additional professional education staff members together with associated supporting staff and facilities necessary for the implementation of their program. Full-time utilization of this minimum set of resources would require an estimated FTE enrollment in upper division elementary education programs of 125 students. This

> set--four or five professors and 125 students enrolled in upper division course work--constitutes a minimum efficient unit for developing these programs.

Despite the relatively unfavorable supply and demand conditions for "regular" teachers--i.e., an emerging surplus--it is clear that many people in Ohio feel a "need" for elementary education degree programs at branch campuses. One portion of this need is felt by adult women who desire access to degree-granting programs close to their homes. Another segment of demand arises from teachers presently employed in school districts who desire in-service education. Many of these teachers seek to up-grade their skills and to qualify for salary increments. School administrators view in-service education as a vehicle through which instruction in the elementary schools may be improved. It also is clear that some students simply prefer to study near home for social as well as for economic reasons. It is certainly less expensive for the student to pursue a college degree while living at home. Housing, food, and transportation costs are generally lower. For these reasons, there is an unquantifiable but very real need felt for such programs.

Certain general tendencies with regard to programs for educating children of elementary school age also should be recognized. The first of these is the widespread awareness of a need to prepare teachers to teach in urban, especially inner-city settings. This concern implies that teacher preparation programs be created which differ from the standard ones offered on most university campuses and that priority be given to branches located best for this purpose. Additionally, there is some tendency to move toward increased specialization by regular elementary education teachers. While this trend is not perfectly clear, it is the

opinion of the Study Group that preparation programs should be strengthened by placing emphasis upon the acquisition of one or two subject-matter specializations, such as language arts, mathematics, or science by regular elementary education teachers.

The fundamental supply and demand conditions expected during the next decade, however, establish rather clearly that it would not be wise to increase the overall capacity of the higher education system in Ohio simply to produce more elementary education teachers; this would be wasteful of the resources of the State. It might also lead to unsatisfied expectations of employment by teachers for whom suitable jobs may not be available. For this reason, we recommend that any program to establish upper division courses at branch campuses be based on a concomitant reduction of enrollment (from trend) at the main campuses. Certain advantages will accrue from reduced growth in programs at main campuses. On the one hand, a reduction of enrollment pressure on these programs could permit increased individualization of instruction and improve the quality of experiences offered. At the same time, many main campus programs have difficulty finding appropriate field experience opportunities for the large number of student teachers presently enrolled. Introduction of programs in branch locations would improve the possibilities of establishing well-supervised, effective field experience activities for significant numbers of students.

Generally, then, we recommend (a) that on a statewide basis the number of teachers certified in the next decade not be increased over the existing trend; (b) that teacher preparation programs for elementary education be reallocated to branches where such reallocation can be done without a waste of resources; and (c) that the State attempt to satisfy

the "needs" of persons living in areas served by branch campuses.

In light of painfully scarce public resources and pressing social needs, we recommend that branch programs be established only where certain technical criteria, related to efficiency, can be met. Briefly these technical criteria are: (1) more than 125 FTE upper division students may be expected to enroll in elementary programs; (2) adequate facilities and libraries exist or are planned; and (3) relatively high demand for new teachers exists.

In the next section of this chapter the criteria will be described more fully; in the succeeding section, the specific recommendations will be detailed. The chapter concludes with an assessment of the overall implications of the recommendations for policy in this area.

II FEASIBILITY CRITERIA

Each branch campus and academic center has been analyzed in terms of seven criteria to determine whether or not a four-year elementary teacher training program might be appropriate. The criteria are:

1. The projected annual teacher demand in the branch service area (1976-80)

2. The potential upper division elementary education enrollment (1970-71)

3. The number of additional students that potentially could be accommodated in lower division, general education programs with present staff by adjusting the student-faculty ratio to an optimal and feasible maximum.

4. The availability and utilization of classroom and laboratory space.

5. The existence of library facilities.

6. The number of other institutions in the service area of the branches that train elementary school teachers.

7. Geographic factors which influence access to the branch.

Teacher Demand

Teacher demand was ascertained by calculating the need for new entrants to the regular elementary teaching force. Variables used to determine elementary teacher demand included projected school enrollments and pupil/teacher ratios. A complete description of the method used to forecast teacher demand in the State and in the service areas may be found in Chapters Two and Three.

Potential Enrollment

Another major criterion examined was whether sufficient student enrollment would be available to utilize effectively the staff and facilities which must be available in order to satisfy appropriate standards of quality. In Chapter Four the minimum number of upper division students (FTE) was placed at 125.

Estimating enrollment for specific branches in this case is difficult because of the circularity involved: unless upper division programs exist, no upper division enrollment is possible. On the other hand, if programs are created, past experience on main campuses with regard to the proportion of students likely to pursue elementary education programs and completing degrees most certainly would change.

A valid estimate for each branch should take into account the following factors:

1. Enrollment in lower division general education programs in the future.
2. The propensity of such students to choose the elementary education major.
3. The propensity of such students to stay at the branch rather than transfer to the main campus.
4. The retention rates of such programs.

None of these factors can be confidently projected into the future. However, the Study Group has secured data that give some indication of the probable future relationships, and has prepared estimates of likely upper division, elementary education enrollment in each branch if such programs were in existence in the academic year 1970-71. Table V.1 contains two such series of enrollment estimates. The first (Estimate 1), because it utilized coefficients derived from main campus enrollment figures, is lower than probably would in fact be the case. The coeffic ent was adjusted, therefore, to .15 in Estimate 2, because it is expected that a larger proportion of lower division students would elect the elementary education major at the branch campus, since this would be the only degree which could be entirely completed there.

The second set of estimates is presented in Table V.2. This table reports an analysis of probable demand in each branch based on the historical proportion of elementary education graduates to total graduates, modified by historical retention rates and an estimate (55 percent) of the proportion of branch students enrolled who would not transfer to main campuses.

A pilot study of preferences of students majoring in elementary education on the Columbus campus of Ohio State University and of lower division students at Mansfield, Newark, Marion, and Lima was conducted in the last week of Spring Quarter 1970. Because of the closing of some State universities it was impossible to survey all branches adequately and to establish unequivocally the preferences of elementary education majors as between pursuing the junior and senior year programs on a branch campus as opposed to a main campus. The data available indicate that a majority would prefer to continue in programs on branch campuses.

Present Capacity of General Education Programs

The number of additional students that could be accommodated in general education courses was estimated by a calculation based upon the

Table V.1 Hypothesized Upper Division Elementary Education Enrollment if Branch Elementary Education Programs were in Operation in Academic Year 1970-71

Branch or Academic Center[a]	Number of Students	
	Estimate 1 [b]	Estimate 2 [c]
Walters	129	203
Tri-County	42	49
Solon	24	41
Euclid	44	74
Lakewood	52	86
Ashtabula	53	99
East Liverpool	30	57
Geauga	18	34
Orville	11	20
Stark	130	243
Trumbull	47	70
Tuscarawas	42	79
Wadsworth	33	63
Hamilton	65	89
Middletown	95	129
Lima	47	142
Mansfield	42	126
Marion	21	63
Newark	30	89
Belmont County	32	96
Chillicothe	23	70
Lancaster	28	83
Portsmouth	26	79
Zanesville	31	93
Ironton	12	35
Piqua	12	17
Western Ohio	34	47

(a) Insufficient data resulted in an inability to establish the necessary coefficients for the five branch campuses or centers not appearing in this table.

(b) Based on the average experience of the main campus for available years; coefficients relating upper division enrollment in elementary education (head count) to lower division total enrollment (FTE) ranged from approximately .05 at Ohio U. and O.S.U. to .11 at Central State, Miami, and Wright State.

Table V.1 (Cont.)

(c) Based on assumed value of .15 for the coefficient in expectation that, because elementary education would be the only degree which could be completed entirely at the branch campus, a larger proportion of lower division students would elect the elementary education major.

Table V.2 Potential Student Demand for Major in Elementary Education at Branch Campuses and Academic Centers 1970-71

Branch (a)	Number of Students (b)
Firelands	102
Walters	733
Tri-County	21
Solon	464
Euclid	499
Lakewood	486
Ashtabula	121
East Liverpool	66
Tuscarawas	60
Wadsworth	232
Hamilton	305
Middletown	375
Lima	69
Mansfield	61
Marion	40
Newark	49
Belmont County	79
Chillicothe	57
Lancaster	73
Portsmouth	57
Zanesville	76
Piqua	143
Western Ohio	99

(a) Insufficient data resulted in an inability to establish the necessary coefficients for the nine branch campuses not appearing in this table.

(b) See Chapter Five for assumptions underlying these estimates.

difference between an assumed "ideal" student/faculty ratio (25/1) and the actual ratio at any institution. The difference between these two numbers (25-X), multiplied by the number of faculty at any institution, yields either a positive or negative number. Where the difference is positive, it represents the additional number of students that could be accommodated without additional staff. Where the difference is negative, that number divided by 25 yields the necessary number of additional staff required to attain a student/faculty ratio of 25/1.

Utilization of facilities

The utilization of facilities and excess capacity was determined by examining 1969-70 data provided by the Ohio Board of Regents on number of student stations available. The data are classified by time of day (daytime, evening) and by type of station (classroom, laboratory), and are reported in Table V.3. The actual utilization of facilities, shown in the same table, reflects the number of student-stations in-use as a percent of the number of student stations available.

Library facilities Data with regard to library facilities was also available through the Board of Regents. The amount of space (in square feet) also is shown in Table V.3.

Other Teacher Training Institutions

The American Association of Colleges of Teacher Education provided information as to which private colleges in Ohio offer programs in elementary teacher education. Because data on the number of certified elementary teachers produced by all colleges was not available for the most recent years, only the institution's location with respect to the service areas of each branch was considered.

Geographic Factors

In several cases, the geographic criterion was especially important in determining the desirability of establishing an elementary education

Table V.3

Library Facilities, and Number and Utilization of Student Stations at Selected Branch Campuses, 1969 (a)

Branch	Library Facilities (Square Feet)	Number of Student Stations, Day or Evening (b)		Utilization of Student Stations (c)			
				Day (d)		Evening	
		Classroom	Laboratory	Classroom	Laboratory	Classroom	Laboratory
Stark	8120	1706	307	23.7	23.6	18.8	7.8
Ashtabula	7451	1174	351	12.0	8.1	9.3	9.7
Firelands	10577	751	406	15.6	10.3	8.5	7.3
Mansfield	2844	643	268	30.6	25.3	8.2	1.4
Lima	4555	1592	299	16.4	17.2	3.4	7.2
Solon	..	..	..	..	..	..	..
Walters	9172	1376	320	32.6	30.8	2.1	.0
Chillicothe	5447	1295	458	6.5	4.6	8.2	5.4
Zanesville	7242	1098	230	11.0	6.8	16.1	14.0
Lancaster	8625	1232	264	6.4	4.7	15.0	8.5

(a) All data for autumn 1969, except for Lima and Mansfield, which are 1968 data; source: unpublished data provided by the Ohio Board of Regents, May 1970.

(b) It is assumed that the same number of student stations available during the day are available in the evening.

(c) Percentage of stations actually in use.

(d) Day utilization extends from 8 A.M. to 6 P.M.; evening, after 6 P.M.

program. Wherever possible, the following factors were considered:

1. Access to major highways in more than one direction.
2. Distance to and from population areas to be served.
3. Physical size of the area to be served.
4. Other existing educational facilities and their proximity.
5. Natural boundaries.
6. Degree of urbanization.

In conducting the entire analysis, each branch or center was considered with regard to the degree to which it satisfied these criteria. The analysis lead the Study Group to recommend that it is feasible and it may be desirable to develop upper division elementary education programs in nine branches. These recommendations are detailed below.

III RECOMMENDATIONS

Specific Branches

Stark The Stark County Branch of Kent State University at Canton is clearly a high priority location for a four-year elementary teacher training program. This recommendation is determined by a variety of factors, foremost among which is a projected average annual requirement for beginning teachers in the service area (1976-1980) of 358. In addition, the upper division elementary education enrollment of 243 greatly exceeds the established criterion of a minimum of 125. (See Table V.1) One hundred fifty-two additional students may be accommodated with the existing general education instructional staff, based upon a student/faculty ratio of 25/1. Utilization of classroom and laboratory space falls considerably below maximum. Classroom utilization is 23.7 percent; laboratory utilization is 23.6 percent; library facilities exist. Although four other

elementary teacher training institutions are located within the service area, the Stark County Branch is selected because of its strategic location in a heavily-populated industrial area. A network of major highways also enables it to serve an extensive surrounding rural area.

Firelands The Firelands branch campus of Bowling Green State University, by virtue of its location, serves the entire north central area of Ohio from Toledo to Cleveland, with no competitive private colleges with elementary teacher training programs in the area. In this service area the annual requirement for beginning teachers, 1976-80, is 129. Although upper division elementary education enrollment figures are not available, the geographical factors appear to be overwhelmingly in favor of its recommendation. Utilizing present staff, the student expansion estimate in general education courses is 88. Further support is provided by the low classroom and laboratory space utilization 15.6 percent and 10.3 percent respectively. Library facilities are available.

Mansfield The Mansfield branch of The Ohio State University meets the criterion of upper division elementary education enrollment greater than 125, with a total of 126. The average annual requirement for beginning teachers, 1976-80, for this service area numbers 78. Data concerning the present utilization of staff are not available. Classroom and laboratory space utilization is 30.6 percent and 25.3 percent respectively, with a library available. Further support is provided by virtue of its location in an area surrounded by many rural communities and small towns. Only one other institution provides elementary teacher training in this area.

Ashtabula The Ashtabula branch of Kent State University serves the entire northeast corner of Ohio, including the east side of Cleveland

from Solon to the Pennsylvania State line and the region south to the service areas of Youngstown State and Kent State Universities. Only one other institution in the service area trains elementary teachers--a small private college for women. It is estimated that the 1976-80 demand for beginning teachers in the area will be 164. Although the estimated upper division elementary education enrollment for 1970-1971 is only 99, 179 additional students may be added without requiring additional general education faculty. The utilization of classroom and laboratory space is very low (12.0 percent and 8.1 percent respectively), and library facilities exist.

Lima The Lima branch of The Ohio State University is the fifth and final branch specifically recommended for expansion to a four-year elementary education teacher training institution. This is due to a number of factors, among which is the large, five-county area which it serves. Good highways provide easy access from a predominately rural service area. The projected average annual requirement for beginning teachers for 1976-80 is 106, with upper division elementary education enrollment projected to exceed the minimum with a total of 142 students. Figures are not available for utilization of staff. Low utilization of classroom and laboratory facilities (16.4 percent and 17.2 percent respectively) provides an excess of facilities space. A library is present. Only two small private colleges train elementary education teachers in the entire five-county service area.

Other Areas, Branches to be Designated

A second category of recommendations also establishes the need for four-year elementary teacher training programs, but raises the question as to which branch would best serve the needs of each area.

Cleveland It is our opinion that the location of the Solon Branch of Cleveland State University would serve the needs of the surrounding Cleveland metropolitan area more adequately than either Lakewood or Euclid. Solon is located in the more heavily populated eastern sector of the area and consequently has locational advantages, being able to serve the northeast, east, southeast, south, and southwestern portions of the region with relative ease of access. Persons located closer to the heart of Cleveland could attend the main campus. The private institutions, of which there are seven, are located in scattered directions and serve all portions of the area. Though the upper division elementary education enrollment criterion of more than 125 has not been met (the estimate is only 41), the average annual requirement for beginning teachers in Cuyahoga and surrounding counties (1976-1980) totals 796. With maximum utilization of present general education faculty (student/teacher ratio of 25/1), 42 additional students could be accommodated. However, the lack of classroom, laboratory, and library facilities makes it inadvisable to recommend Solon for this purpose. Further investigation is required to assess the situation in this region adequately.

Cincinnati The Raymond Walters branch of the University of Cincinnati serves the heavily populated, urban southeast corner of the State. Because the Middletown and Hamilton branches do not sufficiently satisfy the criteria for selection and because of the need for a branch campus in the area, Walters is recommended. It is anticipated that it will be able to serve the Hamilton-Middletown area in addition to greater Cincinnati. In the former area, Miami University and Western College for Women also train elementary school teachers, while in Cincinnati two

private colleges and the University of Cincinnati have programs. The Walters branch campus ranks quite high in all criteria, but particularly in terms of average annual requirements for beginning teachers (1976-80) of 434. In addition, it has a potential upper division elementary education enrollment of 203 and can accommodate 170 more students in general education programs without adding faculty. Along with library facilities, there is an excess of classroom and laboratory space; utilization is below one-third.

Southeastern Ohio Chillicothe and Zanesville, both branches of Ohio University, serve an extensive area in the south central and east central parts of the State. These branches are recommended as a package, with Chillicothe serving an area from Athens west to Cincinnati and Columbus south to Portsmouth; and Zanesville serving the area from Athens north to Canton and Columbus east to the West Virginia line. Only a single, small private college is located in the service area of both branches, and existing utilization of facilities at these branches is quite low. (See Table V.3). The projected annual requirement for beginning teachers in the Chillicothe service area is 44, while in the Zanesville area it is 57. Neither branch, however, meets the minimum projected requirement of more than 125 students enrolled in an upper division elementary education program. Chillicothe's present general education staff utilization would enable it to add 70 students without additional staff, while Zanesville presently has a student/teacher ratio higher than 25/1.

The Lancaster branch of Ohio University might serve as a single alternative to the establishment of four-year programs at both Zanesville and Chillicothe. Although it would not service the area as adequately as the preceding two, it could serve fairly well at lower cost. Annual

beginning teacher requirements (1976-80) for Chillicothe and Zanesville total 101 and would have to be met at least partially by the Lancaster branch. The combined upper division enrollment projections for 1970-71 are 163, and it is anticipated that a proportion of these would shift to Lancaster. The average annual requirement for beginning teachers (1976-80) in the Lancaster area (excluding Franklin County) is 55. Upper division elementary education enrollment is 83. In order to bring the present student/faculty ratio to the desired 25/1, it would be necessary to add two members to the instructional staff, since present staff utilization is beyond maximum desirable. The utilization of classroom and laboratory space is 6.4 percent and 4.7 percent respectively; and library facilities are present. Three private institutions exist in the same service area, two of which are located in the Columbus metropolitan area.

IV SUMMARY AND IMPLICATIONS

The recommended plan of priorities for establishing upper division elementary education programs in branch campuses is a modest one. Nine (possibly eight) branches seem most adequately to satisfy the criteria established and can satisfy the "need" for degree programs to a substantial degree. Although modest, this proposed program would raise total public expenditures for elementary teacher preparation by between 1.3 and 2.6 million dollars per year if it were implemented fully and if the estimates of potential enrollment are accurate.[1] The lower and upper bounds on the cost estimates depend on suppositions regarding excess faculty capacity in the general education program. The latter assumes no excess capacity, while

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1 This assumes that qualitative program inprovements would prevent any offsetting reduction in expenditures on main campuses.

Table V.4 Estimated Annual Operating Expenditures For Professional Component of Recommended Four-Year Teacher Education Programs

Branch	Projected Enrollment	Staff Required	Operating Expense
Stark	243	10	246,500
Ashtabula	99	5	123,250*
Firelands	..	5	123,250*
Mansfield	126	5	123,250
Lima	142	6	148,000
Solon	41*	5	123,250*
Walters	203	8	197,250
Chillicothe	70*	5	123,250*
Zanesville	93*	5	123,250*
Lancaster**	83*	5	123,250*
Total			1,331,250

* Based on minimum enrollment assumption of 125 students.

** Excluded from the total since it is suggested as a possible alternative to Chillicothe and Zanesville, see text.

the former presumes sufficient unused capacity to handle the general education coursework requirement of all juniors and seniors.

Estimates of additional operating costs for the professional component of the program for each branch are reported in Table V.4. The procedure for developing these estimates involved the use of enrollment estimates from Table V.1, Estimate 2, and estimations of average faculty salary costs, noninstructional salaries, operating costs, and equipment and overhead costs.

The average annual salary of faculty members in professional education at branches was estimated to be $12,000 in 1970-71. Additional personnel and other costs were estimated by applying historical Ohio State University percentages to the estimated average salary.[2] Noninstructional salaries were estimated as follows:

(1) College administration 12.2% of $12,000.

(2) Departmental Administration and Committee work 14.5% of $12,000.

(3) Secretarial 14.4% of $12,000.

Personnel benefits were derived by applying 10 percent in $16,932., the average total salary (instructional as well as noninstructional) bill per faculty member. Operating cost and equipment were derived by applying 5.3 percent to this total salaries and wages figure. Overhead costs (University administration and facilities) were assumed at 30.3 percent of $16,932. Overhead and real costs--i.e., adjusted for price differences--may tend to be lower where branches are located in smaller communities.

In summary, the total cost estimates for one elementary teacher education faculty member and the necessary noninstructional support,

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2 Donald P. Anderson, "Cost Data, The Ohio State University" (Mimeograph; The Ohio State University, College of Education, 1969).

personnel benefits, operating costs, and overhead is $24,654. These costs may be summarized as follows:

Average cost per faculty member[3]		$ 12,000
Noninstructional salaries		4,932
College Administration	$1,464	
Departmental Administration	1,740	
Secretarial Salaries	1,728	
Personnel Benefits		1,693
Operating Costs and Equipment		897
Overhead[4]		5,132
		24,654

On the basis of available information, we judge that additional classroom and library facilities will not be needed in order to implement this plan except at the Solon branch. In that case, data available indicate that additional capital improvements will be required if that branch were chosen.

Greater expansion of four-year teacher education programs is possible but would be undesirable given foreseeable conditions of teacher supply and demand. This proposal identifies branches in which there would be a good probability that programs of high quality could be utilized fully. Introduction of such programs is likely to have a positive effect on the quality of programs in elementary teacher education at the main campuses affected through a reduction of enrollments (below trend) and through the corresponding increase in opportunity for individualizing instruction and specialization. The plan also represents a feasible way to satisfy the

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3 Includes junior and senior faculty members.

4 Includes university administration and facilities.

the need of intending teachers throughout the State with the necessary resources, in a timely fashion, and development of appropriate organizational structures so that program control can be vested in the faculty as required by accreditation standards. In the judgment of the Study Group these steps can be taken.

APPENDIXES

APPENDIX A

MEMBERS OF THE TEACHER EDUCATION STUDY GROUP

Virgil Blanke	Professor--Educational Development
Ann Furlong	College of Education
Charles Glatt	Associate Professor--Educational Development
Michael Kean	College of Education--Educational Development and Administration
James Kerber	Assistant Professor--Early and Middle Childhood Education
Marlin Languis	Associate Professor--Early and Middle Childhood Education
James Mauro	College of Social and Behavioral Sciences
Karen Means	College of Education
Richard Miller	College of Education--Educational Administration
Wesley Miller	College of Education--Early and Middle Childhood Education
Joel Rosenberg	College of Education--Educational Development
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APPENDIX B

ACKNOWLEDGEMENTS

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William Phillips	EPDA Coordinator, Ohio Department of Education
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Franklin B. Walter	Assistant Superintendent for Public Instruction, Ohio Department of Education
Henry Whitcomb	Finance Officer, Ohio Board of Regents
Marlen D. Yost	Chief of Evaluation and Planning, Research Division, Ohio Department of Education

LOCATION OF INSTITUTIONS OF HIGHER EDUCATION
IN THE STATE OF OHIO

KEY TO THE LOCATION OF INSTITUTIONS OF HIGHER EDUCATION IN THE STATE OF OHIO

STATE UNIVERSITIES

1. University of Akron, Akron (Summit)
2. Bowling Green State U., Bowling Green (Wood)
3. Central State U., Wilberforce (Greene)
4. U of Cincinnati, Cincinnati (Hamilton)
5. Cleveland State U., Cleveland (Cuyahoga)
6. Kent State U., Kent (Portage)
7. Miami University, Oxford (Butler)
8. Ohio State University, Columbus (Franklin)
9. Ohio University, Athens, (Athens)
10. University of Toledo, Toledo (Lucas)
11. Wright State University, Dayton, (Montgomery)
12. Youngstown State U., Youngstown (Mahoning)

STATE UNIVERSITY BRANCH CAMPUSES

Bowling Green

13 Firelands, Huron, (Erie)
14 Bryan Academic Center, Bryan, (Williams)
15 Fostoria Academic Center, Fostoria, (Seneca)
16. Fremont Academic Center, Fremont, (Sandusky)

Cincinnati

17 Raymond Walters Branch, Cincinnati, (Hamilton)
18 Tri-County Academic Center, Macan, (Brown)

Cleveland State U.

19 Solon Academic Center, Solon, (Cuyahoga)
20 Euclid Academic Center, Euclid, (Cuyahoga)
21. Lakewood Academic Center, Lakewood, (Cuyahoga)

Kent State

22 Ashtabula Branch, Ashtabula, (Ashtabula)
23. Columbiana Branch, East Liverpool, (Columbiana)
24 Columbiana Branch, Salem, (Columbiana)
25 Geauga County Academic Center, Chesterland, (Geauga)
26. Orville Academic Center, Orrville, (Wayne)
27. Stark County Branch, Canton, (Stark)
28. Trumball Branch, Warren, (Trumball)
29 Tuscarawas County Branch, New Philadelphia, (Tuscarawas)
30. Wadsworth Academic Center, Wadsworth, (Medina)

Miami University

31 Hamilton, Hamilton, (Butler)
32 Middletown, Middletown, (Butler)

Ohio State U

33 Lima Campus, Lima, (Allen)
34 Mansfield Campus, Mansfield, (Richland)
35 Marion Campus, Marion, (Marion)
36 Newark Campus, Newark, (Licking)

Ohio University

37 Belmont County, St. Clairsville, (Belmont)
38 Chillicothe, Chillicothe, (Ross)
39 Lancaster, Lancaster, (Fairfield)
40 Portsmouth, Portsmouth, (Scioto)
41 Zanesville, Zanesville, (Muskingum)
42 Ironton, Ironton, (Lawrence)

Wright State University

43 Piqua, Piqua, (Miami)
44 Western Ohio, Celina, (Mercer)

COMMUNITY COLLEGES

45 Cuyahoga Community College, Cleveland, (Cuyahoga)
46 Lakewood Community College, Mentor, (Lake)
47 Lorain County Community College, Elyria, (Lorain)
48 Sinclair Community College, Dayton, (Greene)

PRIVATE COLLEGES AND UNIVERSITIES

49 Antioch College, Yellow Springs, (Greene)
50 Ashland College, Ashland, (Ashland)
51 The Athenaeum of Ohio, Norewood, (Hamilton)
52 Baldwin Wallace College, Berea, (Cuyahoga)
53 Bluffton College, Bluffton, (Allen)
54 Capital U , Columbus, (Franklin)
55 Case Western Reserve U., Cleveland, (Cuyahoga)
56 Cedarville College, Cedarville, (Greene)
57 U. of Dayton, Dayton, (Montgomery)
58 Defiance College, Defiance, (Defiance)
59 Dennison U., Granville, (Licking)
60 Edgecliff College, Cincinnati, (Hamilton)

61 Findlay College, Findlay, (Hancock)
62 Heidelberg College, Tiffin, (Seneca)
63. Hiram College, Hiram, (Portage)
64 John Carroll University, Cleveland, (Cuyahoga)
65 Kenyon College, Gambiers, (Knox)
66 Lake Erie College, Painesville, (Lake)
67. Malone College, Canton, (Stark)
68. Marietta College, Marietta, (Washington)
69. Mary Manse College, Toledo, (Lucas)
70 College of Mt. St. Joseph on the Ohio, Mount St. Joseph, (Cincinnati)
71 Mount Union College, Alliance, (Stark)
72 Muskingham College, New Concord, (Muskingum)
73. Notre Dame College, Cleveland, (Cuyahoga)
74. Oberlin College, Oberlin, (Lorain)
75 Ohio Dominican College, Columbus, (Franklin)
76 Ohio Northern U., Ada, (Hardin)
77 Ohio Wesleyan U., Delaware, (Delaware)
78. Otterbein College, Westerville, (Franklin)
79 Rio Grande College, Rio Grande, (Gallia)
80. Saint John College of Cleveland, Cleveland, (Cuyahoga)
81 College of Steubenville, Steubenville, (Jefferson)
82 Urbana College, Urbana, (Champaign)
83 Ursuline College, Cleveland, (Cuyahoga)
84 Walsh College, Canton, (Stark)
85 Western College for Women, Oxford, (Butler)
86. Wilberforce University, Wilberforce, (Greene)
87 Wilmington College, Wilmington, (Clinton)
88 Wittenberg University, Springfield, (Clark)
89 College of Wooster, Wooster, (Wayne)
90 Xavier U., Cincinnati, (Clermont)